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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
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| 09/610,586 | 07/05/2000 | Larry A Spino | 32234-164775 | 5218 |

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Venable Baetjer Howard & Civiletti LLP
P O Box 34385
Washington, DC 20043-9998

| EXAMINER |
|---|
| CHEUNG, WILLIAM K |

| ART UNIT | PAPER NUMBER |
|---|---|
| 1713 | 5 |

DATE MAILED: 07/24/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

| Office Action Summary | Application No. | Applicant(s) | |
|---|---|---|---|
| | 09/610,586 | SPINO ET AL. | |
| | Examiner | Art Unit | |
| | William K Cheung | 1713 | |

*-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --*

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

1)☒ Responsive to communication(s) filed on *23 October 2000* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

4)☒ Claim(s) *1-11* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-11* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

**Application Papers**

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *4* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

## DETAILED ACTION

### *Information Disclosure Statement*

1. The information disclosure statement (Paper No. 4) filed on October 23, 2002, is not in the proper form. 37 CFR 1.98(b) requires a list of all patents, publications, or other information submitted for consideration by the Office, and MPEP § 609 A(1) states, "the list may not be incorporated into the specification but must be submitted in a separate paper." For the instant application, applicants fail to submit a list of all patents, publications, or other information in PT-1449 form.

### *Specification*

2. The specification is objected because Table 1 (page 8) indicates [ash] wt % values of 150%. Can a % ash content be higher than 100 % of the total weight?

### *Claim Rejections - 35 USC § 112*

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. Claim 3 is rejected under 35 U.S.C. 112, first paragraph, as containing subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention. Claim 3 (line 1-3), the recitation "the propylene polymer contains from 100 mg to 500 mg of inorganic residue per kg of propylene polymer" set forth a propylene polymer which requires the claimed propylene polymer to have an inorganic residue of 100-500 mg per kg of propylene polymer. However, in view of the disclosure to Masino (col. 12, line 15-40), there is a high degree of error in determining the amount of inorganic substances such as titanium in a propylene polymer sample. Therefore, since applicants' specification does disclose the proper method for determining the amount of inorganic residue for carrying out the claim 3 invention, the examiner has reasons to believe that one of ordinary skill would have a difficult time to make/use of the claimed invention of claim 3 because one of ordinary skill in the art clearly would not know the proper techniques for determining the amount of inorganic residue per kg of propylene polymer in order to make/use of the invention of claim 3.

5. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

6. Claims 1-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 (line 1), the recitation "essentially free" is considered indefinite because one of ordinary skill in the art would not know at what critical concentration is considered "essentially free", especially for the instant application which deals with additive concentration at ppm levels.

Claims 10-11 provides for the use of composition of claim 1 for the manufacture of shaped objects and object manufactured from the composition, but, since the claim does not set forth any steps involved in the method/process, it is unclear what method/process applicant is intending to encompass. A claim is indefinite where it merely recites a use without any active, positive steps delimiting how this use is actually practiced.

Claims 10-11 are rejected under 35 U.S.C. 101 because the claimed recitation of a use, without setting forth any steps involved in the process, results in an improper definition of a process, i.e., results in a claim which is not a proper process claim under 35 U.S.C. 101. See for example *Ex parte Dunki*, 153 USPQ 678 (Bd.App. 1967) and *Clinical Products, Ltd.* v. *Brenner*, 255 F. Supp. 131, 149 USPQ 475 (D.D.C. 1966).

***Claim Rejections - 35 USC § 103***

7. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham* **v.** *John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. Claims 1-2, 5-8 are rejected under 35 U.S.C. 103(a) as being unpatentable over McCullough et al. (WO 00/12605) in view of Ushioda et al. (US 6,410,662 B1).

*The invention of claims 1-2, 5-8 relates to a* ***composition****, free of phenolic antioxidant, containing a)* ***100 parts by weight of a propylene polymer****, b) from* ***0.005 to 0.1 part (~50 ppm to 1000 ppm) by weight of an amine oxide*** *having structural formula (I) as disclosed in claim 1, wherein* ***R' and R" are groups containing from 1 to 36 carbon*** *atoms, or of a* ***N, N-dialkylhydroxylamine of formula*** $R^1$ $R^2$ ***N-OH (II),*** *wherein* $R^1$ ***and*** $R^2$ ***are independent groups of 1 to 36 carbon*** *atoms, c) from* ***0.1 to***

***0.5 part by weight of a clarifying agent*** *which is defined in applicants' specification (page 4, line 7-25).*

McCullough et al. (page 11, last paragraph; page 12, Table 1) in examples 4-6 disclose polypropylene compositions containing no phenolic antioxidant. McCullough et al. in Table 1 also disclose examples 4-6 containing 500 ppm of bis(hydrogenated tallow alkyl ($C_{16}$-$C_{18}$) hydroxylamine (FS042). Although Table 1 does not show the ppm units on the hydroxylamine added, McCullough et al. (page 6, line 11-15) clearly indicates that the hydroxylamine is to be added in the range of 50 ppm to 5000 ppm, preferably in the range of 200 ppm to 1000 ppm. Therefore, one of ordinary skill in the art would immediately recognize that the units in Table 1 are in ppm. In the specification (page 4, last paragraph), McCullough et al. indicate that the disclosed polypropylene is a random copolymer containing up to 5-weight % of ethylene comonomer.

Regarding claim 8 which claims using a hindered amine in the composition, McCullough et al. (page 8, paragraph 5) clearly suggest using light absorbers such as hindered amine as part of the stabilization package.

Therefore, the difference between the disclosure to McCullough et al. and the present invention is that McCullough et al. are silent on using a clarifying agent in the disclosed composition.

Ushioda et al. (col. 15, line 7-18) disclose the benefits of using nucleating agents, benzylidene sorbitol (col. 16, line 5-31) and aluminum hydroxy-bis[2,2'-methylene-bis(4,6-di-tert-butylphenyl)phosphate] as a nucleating agent (col. 15, line 50) to improve the transparency (clarity) of polypropylene. Therefore, motivated by the expectation of success of improving the rigidity, heat-resisting property and transparency of polypropylene (col. 15, line 9-12), it would have been obvious to one of ordinary skill in the art to use the teachings of Ushioda et al. which teach using a nucleating agent such as benzylidene sorbitol and aluminum hydroxy-bis[2,2'-methylene-bis(4,6-di-tert-butylphenyl)phosphate] compounds to improve transparency into the disclosure to McCullough et al. to obtain the invention of claims 1-2, 5-8.

9. Claim 3 is rejected under 35 U.S.C. 103(a) as being unpatentable over McCullough et al. (WO 00/12605) in view of Ushioda et al. (US 6,410,662 B1) and further in view of Masino (US 5,182,341).

McCullough et al. (page 11, last paragraph; page 12, Table 1) in examples 4-6 disclose polypropylene compositions containing no phenolic antioxidant. McCullough et al. in Table 1 also disclose examples 4-6 containing 500 ppm of bis(hydrogenated tallow alkyl ($C_{16}$-$C_{18}$) hydroxylamine (FS042). Although Table 1 does not show the ppm units on the hydroxylamine added, McCullough et al. (page 6, line 11-15) clearly indicates that the hydroxylamine is to be added in the range of 50 ppm to 5000 ppm, preferably in the range of 200 ppm to 1000 ppm. Therefore, one of ordinary skill in the

art would immediately recognize that the units in Table 1 are in ppm. In the specification (page 4, last paragraph), McCullough et al. indicate that the disclosed polypropylene is a random copolymer containing up to 5-weight % of ethylene comonomer.

The difference between the disclosure to McCullough et al. and the present invention is that McCullough et al. are silent on using a clarifying agent in the disclosed composition and silent on using a propylene polymer having from 100 mg (0.01 ppm) to 500 mg (0.05 ppm) of inorganic residue per kg of propylene polymer.

Ushioda et al. (col. 15, line 7-18) disclose the benefits of using nucleating agents, benzylidene sorbitol (col. 16, line 5-31) and aluminum hydroxy-bis[2,2'-methylene-bis(4,6-di-tert-butylphenyl)phosphate] as a nucleating agent (col. 15, line 50) to improve the transparency (clarity) of polypropylene. Therefore, motivated by the expectation of success of improving the rigidity, heat-resisting property and transparency of polypropylene (col. 15, line 9-12), it would have been obvious to one of ordinary skill in the art to use the teachings of Ushioda et al. which teach using a nucleating agent such as benzylidene sorbitol and aluminum hydroxy-bis[2,2'-methylene-bis(4,6-di-tert-butylphenyl)phosphate] compounds to improve transparency into the disclosure to McCullough et al. to obtain the invention of claim 3.

Further, regarding the polypropylene composition of McCullough et al., McCullough et al. (abstract) indicate that the polypropylene used in the composition is a

high melt flow polypropylene. Since Masino (col. 12, line 15-40) indicate that the preparation of a high melt flow polypropylene requires an amount of inorganic catalyst materials for carrying out the polymerization process, Masino (col. 12, line 15-40) clearly indicates that a propylene polymer such as the high melt flow polypropylene of McCullough would also contain a specific amount of inorganic residue. Therefore, in view of the disclosures to McCullough et al. and Masino, the propylene polymer of McCullough et al. generically include the propylene polymer of applicants' claim 3. Since applicants' specification does not indicate the criticality of the claimed inorganic residue range, the rejection set forth is proper. To obtain a valid invention, applicants must demonstrate the criticality of the instant invention with comparative experimental data to show the criticality of the claimed 100 mg to 500 mg range of inorganic residue.

10. Claims 1, 4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (US 6,238,615 B1).

Kobayashi et al. (col. 9, line 40-67) disclose a polyolefin molding composition containing a propylene copolymer having 50 wt % or more of propylene (col. 9, line 67) and a comonomer that can be ethylene (col. 10, line 7). Kobayashi et al. (col. 41-50) indicates using 0.05 to 7 wt % of nucleating agent (DBS), preferably 0.2 to 2.0 wt % in the resin. DBS denotes dibenzylidene sorbitol compounds (col. 1, line 14-15) as nucleating agents (col. 2, line 18). Further, Kobayashi et al. (col. 6, line 60) suggest using a surfactant in the molding composition. In a list of suitable surfactant suggested

(col. 7, line 37), Kobayashi et al. clearly suggest using $C_7$-$C_{22}$ amine oxides in the molding composition. Although Kobayashi et al. (col. 11, line 67) disclose that the molding composition may contain other additives such as a stabilizer, Kobayashi et al. do not suggest one of ordinary skill in the art must use a stabilizer, especially pertaining to a phenolic antioxidant. Therefore, it would have been obvious to one of ordinary skill in the art to recognize that a phenolic antioxidant is not a critical component in the disclosed molding composition. Although Kobayashi et al. (col. 14, line 53-54) in example 1 disclose using Irganox 1010 which is a phenolic based antioxidant, in re Nehrenberg 126 USPQ 383, applicants must recognize that a reference used in a rejection is not restricted to its preferred embodiment. As long as the broad teachings of Kobayashi et al. do not discourage one of ordinary skill in the art to use a phenolic-based antioxidant, the rejection set forth is proper.

The difference between the disclosure of Kobayashi et al. and the invention of claims 1, 4, is that Kobayashi et al. are silent on using the disclosed inventive features in a single embodiment.

However, because Kobayashi et al. (col. 1, line 5-10) suggest that the disclosed molding composition capable of giving molded articles having high rigidity and high surface gloss, it would have been obvious to one of ordinary skill in the art to use all the teachings in Kobayashi et al. and assemble the disclosed features into a single embodiment to obtain the invention of claim 1, 4.

11. Claim 9 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kobayashi et al. (US 6,238,615 B1) in view of Ushioda et al. (US 6,410,662 B1).

*Set forth from paragraph 10 of instant office action, the composition disclosed in Kobayashi et al. and the composition being claimed are substantially similar.*

The difference between the invention of claim 9 and the disclosure to Kobayashi et al. is that Kobayashi et al. are silent on using a phosphate in the composition.

Ushioda et al. (col. 15, line 7-18) disclose the benefits of using nucleating agents, benzylidene sorbitol (col. 16, line 5-31) and aluminum hydroxy-bis[2,2'-methylene-bis(4,6-di-tert-butylphenyl)phosphate] as a nucleating agent (col. 15, line 50) to improve the transparency (clarity) of polypropylene films. In view of the disclosed nucleating agents in Ushioda et al., the sorbitol and phosphate based nucleating agents are functional equivalent as nucleating agents. Therefore, in re Dillon, 919 F.2d at 692, 16 USPQ2d at 1900., it would have been obvious to one of ordinary skill in the art to replace the disclosed sorbitol-based nucleating agent with a phosphate-based nucleating agents after reading the disclosure to Ushioda et al. to obtain the invention of claim 9 with a reasonable degree of expectation of success.

***Conclusion***

12. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William K Cheung whose telephone number is (703) 305-0392. The examiner can normally be reached on Monday-Friday 9:00AM to 2:00PM; 4:00PM to 8:00PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, David WU can be reached on (703) 308-2450. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 305-5885 for regular communications and (703) 305-5885 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-0661.

William K. Cheung
July 20, 2002

DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

DAVID W. WU
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 1700

# O/Ref. : SPE 00/09 - Information Disclosure Statement

**Documents cited in the description**

- WO 94/24344 (CIBA-Geigy )
- WO 97/11993 (General Electric)
- US-A-5204305 (SOLVAY)
- US-A-4210729 (SOLVAY)
- US-A-5780379 (SOLVAY)

7/3/02